

## REMARKS

The Office Action mailed on June 16, 2003 has been carefully considered and the Examiner's remarks are appreciated. Claims 1-16 were originally filed, claims 5 and 6 previously canceled, and claims 17-22 previously added. Claims 1, 4, 7, 11, 13, 15, 17, and 19-21 have been amended herein. Therefore, claims 1-4, and 7-22 are presented for examination, with support for the amendments found in the Specification, Claims, and Drawings. Applicants respectfully request reconsideration of claims 1-4, and 7-22 in view of the above amendments and the following remarks.

### Discussion of the Rejections Under 35 USC §102(b) or 35 USC §103(a)

The Examiner rejected claims 1-15 and 17-20 under 35 U.S.C. §102(b) as being anticipated by, or in the alternative under 35 USC §103(a) as obvious over, the article "Glow Discharge Detector" by Koo et al. (hereinafter "Koo"). The Examiner also rejected claims 16, 21, and 22 under 35 USC §103(a) as obvious over Koo.

In support of his rejections, the Examiner stated that Figure 2 of the Koo reference shows the pin of a first embodiment having a tapered end and a flat end. The Examiner then draws from this embodiment to infer that, *"in the embodiment utilizing two tungsten pins, it would be reasonable to assume that both pins have a similar structure, i.e. both pins have a first tapered end and a second flat end. Therefore, the Examiner argues that the one pin representing the solid member is provided with a flat end."*

It is respectfully submitted, however, that there is no teaching or suggestion in Koo that the opposite "head" end of the tapered "point" end does in fact have a flat surface, as required by independent claims 1 and 11. On the contrary, it can be reasonably inferred from the small dimensions and negligible surface area of the pin head, i.e. "head diameter of 20 microns", that

the surface contour of the pin head is likewise inconsequential. This is consistent with what is commonly understood to be the characteristic feature(s) of a “pin”, i.e. a small thin elongated object (typically metal) having a pointed end, with a width/length  $\ll 1$ . In contrast, the solid member/anode of independent claims 1 and 11 is characterized as having a distinct flat end, which as shown in Figure 3 of the Drawings is placed closely adjacent the pointed end of the cathode member 16 in dramatic contrast therewith. To clarify this distinction, Applicants have amended claim 1 by replacing “solid member” with “solid rod”, and in claim 11 by replacing “solid anode” with “solid rod anode.” It is appreciated that one of ordinary skill in the art would readily distinguish a “rod” from a “pin” based on, for example, the rod having a width/thickness greater than that of a pin. Characterized as a “rod,” it is therefore submitted that the solid anode/member structure of the present invention is further capable of being characterized as having a flat end, which could not otherwise be inferred from a simple pin structure alone. Please note that dependent claims 3, 7, 13, 15, 17, and 19-21 have also been amended, but only for consistency and antecedent basis with respect to claims 1 and 11.

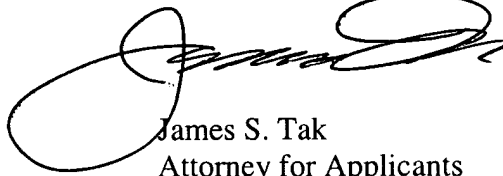
Notwithstanding the above reasons, Applicants have amended claims 1 and 11 to further clarify the distinctions of the present invention with the prior art. In particular, each of claims 1 and 11 now specifies that the flat end of the anode member is located closely adjacent the tapering end of the first member (i.e. cathode). It is respectfully submitted that this limitation is also not disclosed, taught, or suggested by Koo. At best, Koo suggests using two tungsten pins swaged in both anode and cathode stainless tubes. However, with respect to the pin tips (points), only the orientation of the cathode pin tip is described, i.e. set as close as possible to the open stainless tube (i.e. anode). Nothing is intimated about the orientation of a solid rod anode with respect to the point end of a cathode member; in particular, a solid anode member having a flat

end closely adjacent the cathode pin tip, whereby a more stable glow discharge detection can take place. For the foregoing reasons, it is respectfully submitted that the 102-based rejections are inappropriate in view of MPEP §2131 for failing to expressly or inherently describe each and every element set forth in each claim, in a single prior art reference. It is also respectfully submitted that the 103-based rejections are also now inappropriate.

#### Summary

Applicants therefore respectfully submit that claims 1-4 and 7-22 are in condition for allowance, and requests allowance of claims 1-4 and 7-22. In the event that the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, he is respectfully requested to initiate the same with the undersigned at (925) 422-7274.

Respectfully submitted,



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